

Amendments to the Claims:

This listing of claims will replace all prior listing of claims in the application.

Listing of Claims:

1. (Original) A thin-film magnetic head comprising:
 - a lower core layer having an upper surface;
 - a gap layer formed on the lower core layer;
 - an upper magnetic layer for determining a track width formed on the gap layer, the width of the upper magnetic layer being smaller than that of the lower core layer;
 - an upper core layer formed on the upper magnetic layer; and
 - a gap depth determining insulating layer for determining a gap depth which is a depth of an interface between the gap layer and the upper magnetic layer in a height direction extending from an opposing face opposing a recording medium, the gap depth determining insulating layer disposed adjacent to the upper surface in a posterior region extending from the opposing face in the height direction;
 - wherein a contacting face between the upper magnetic layer and the gap depth determining insulating layer is provided at a contacting location deeper in the height direction than a forming location at which the gap depth is formed.
2. (Original) A thin-film magnetic head according to Claim 1, wherein the contacting face between the upper magnetic layer and the gap depth determining insulating layer is provided so as to be gradually deeper in the height direction from the bottom to the top of the contacting face.
3. (Original) A thin-film magnetic head according to Claim 2, wherein the gap depth determining insulating layer is provided with a sloping face formed so as to be gradually deeper in height direction from the bottom to the top of the sloping face, and wherein the upper magnetic layer is continuously provided on the gap layer and the sloping face of the gap depth determining insulating layer.

4. (Original) A thin-film magnetic head according to Claim 1, wherein an angle formed by the upper surface of the lower core layer and a virtual plane including the top edge of the bottom edge of the contacting face between the gap layer and the gap depth determining insulating layer is in the range of about 45° to 90°.

5. (Original) A thin-film magnetic head according to Claim 4, wherein the angle formed by the upper surface of the lower core layer and the virtual plane including the top edge and the bottom edge of the contacting face between the gap layer and the gap depth determining insulating layer is about 80° or less.

6. (Original) A thin-film magnetic head according to Claim 1, wherein an angle formed by the upper surface of the lower core layer and a virtual plane including the top edge and the bottom edge of a contacting face between the lower magnetic layer and the gap depth determining insulating layer is in the range of about 45° to 90°.

7. (Original) A thin-film magnetic head according to Claim 6, wherein the angle formed by the upper surface of the lower core layer and the virtual plane including the top edge and the bottom edge of the contacting face between the lower magnetic layer and the gap depth determining insulating layer is about 80° or less.

8. (Original) A thin-film magnetic head according to claim 2, wherein the gap depth determining insulating layer is provided with a vertical face at the opposing face side, the vertical face being approximately vertical along the lower core layer, and wherein the back end of the gap layer in the height direction and the back end of the interface between the gap layer and the upper magnetic layer in the height direction are in contact with the vertical face.

9. (Original) A thin-film magnetic head according to Claim 1, wherein the gap depth determining insulating layer comprises an organic material.

10. (Original) A thin-film magnetic head according to Claim 9, wherein the gap depth determining insulating layer comprises an ultraviolet photocurable resin material.

11. (Original) A thin-film magnetic head according to Claim 1, wherein the gap depth determining insulating layer comprises an inorganic material.

12. (Original) A thin-film magnetic head according to Claim 11, wherein the gap depth determining insulating layer comprises one of SiO_2 and Al_2O_3 .

13. (Original) A thin-film magnetic head according to Claim 1, wherein the gap layer comprises a nonmagnetic metal material which can be applied by plating.

14. (Original) A thin-film magnetic head according to Claim 13, wherein the nonmagnetic metal material is at least one selected from the group consisting of NiP, NiPd, NiW, NiMo, NiRh, Au, Pt, Rh, Pd, Ru, and Cr.

15. (Original) A thin-film magnetic head according to Claim 14, wherein the nonmagnetic metal material is NiP, and the P content in the NiP measured by inductively coupled plasma emission spectrometry is in the range of about 11 to 14 mass percent.

16. (Original) A thin-film magnetic head according to Claim 15, wherein the nonmagnetic metal material is NiP, and the P content in the NiP measured by inductively coupled plasma emission spectrometry is in the range of about 12.5 to 14 mass percent.

17. (Original) A thin-film magnetic head according to Claim 1, further comprising an insulating layer formed in a posterior region of the gap depth determining insulating layer in the height direction so as to be in contact therewith, and a coil layer provided on the insulating layer inducing a recording magnetic field in the upper core layer and the lower core layer, wherein, when an interface between the upper magnetic layer and the upper core layer is a reference plane, the upper

surface of the insulating layer is at the same level as the reference plane.

18. (Original) A thin-film magnetic head according to Claim 17, wherein the insulating layer is provided so as to cover the gap depth determining insulating layer and to be in contact with the back end of the upper magnetic layer in the height direction.

19. (Original) A thin-film magnetic head according to Claim 17, wherein the insulating layer is an inorganic insulating layer comprising an inorganic material.

20. (Original) A thin-film magnetic head according to Claim 17, further comprising a back gap layer formed in the insulating layer in a posterior region of the gap depth determining insulating layer in the height direction so as to be in contact with the lower core layer, the back gap layer comprising at least one of a magnetic metal material and a nonmagnetic metal material;

wherein the upper surface of the back gap layer is at the same level as the reference plane and the upper surface of the insulating layer, and a base portion of the upper core layer is magnetically coupled with the back gap layer.

21. (Original) A thin-film magnetic head according to Claim 17, further comprising a lead electrode layer formed under the insulating layer, and a back gap layer formed on the lead electrode layer, the back gap layer comprising at least one of a magnetic metal material and a nonmagnetic metal material;

wherein the upper surface of the back gap layer is at the same level as the reference plane and the upper surface of the insulating layer, and a terminal of the coil layer is electrically connected with the back gap layer.

22. (Original) A thin-film magnetic head according to Claim 20, wherein the back gap layer is a multiple-layer film having the same laminated structure as that formed of the lower magnetic layer, the gap layer, and the upper magnetic layer.

23. (Original) A thin-film magnetic head according to Claim 20, wherein the

back gap layer is a single layer film composed of the same material as one of a material for the lower core layer and a material for the upper core layer.

24. (Original) A thin-film magnetic head according to Claim 20, wherein the back gap layer is one of a single layer film and a multiple-layer film, the back gap layer composed of a magnetic metal material differing from one of a material for the lower core layer and a material for the upper core layer.

25.- 41. (Cancelled)

42. (Original) A thin-film magnetic head according to Claim 1, further comprising a lower magnetic layer disposed between the gap layer and the lower core layer.

43. (Cancelled).